

Work Order ID 67798

Wednesday, March 30, 2011 12:47:48 PM

Page 1

Item ID: D6011-115

Accept

Revision ID:

Item Name: Crosstube Material

Start Date: 3/30/2011 Start Qty: 20.00

Required Date: 10/8/2011 Req'd Qty: 20.00

Reference:

Approvals:

Process Plan: *mt*

Date: *11-03-30* Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6011

Rev A1

100

0.00



Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O: *13753* a) Order as per Dwg D6011 b) Material: 2.750 x 0.650 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube c) Minimum ultimate tensile strength = 77 ksi d) Minimum tensile yield strength = 66 ksi

CL 11/03/31

(20)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

4/2/01/7 (22)

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg

Winters (22)

see ultimate results last page

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 67798

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Item ID: D6011-115

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Material

Start Date: 3/30/2011 Start Qty: 20.00

Cust Item ID:

Required Date: 10/8/2011 Req'd Qty: 20.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

N/A DP

12-1-13

PTQ

140

Identify as per dwg & Stock Location:

46

0.00



Packaging

Memo

0.00

Packaging

TW

12-1-13

150

QC21- Final Inspection - Work Order Release

0.00



QC


Memo

0.00

Quality Control

12/1/31

12-01-31
02

W/O: 67798		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-1-13	130	Remove Step		12-1-13 12.02.01			S 12/2/01

Part No: D6011-115 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

[illegible]

Required Date: 10/8/2011

Required Qty: 20.00

Comments: IPP Rev: A 01.08.17 New Issue TSM
IPP rev B 07.09.18 rev A1 dwg EC verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6011-115P		Purchased	No			100	Each	0.0000	1	20			

[illegible]

Crosstube Material



42/0/74 26

Dart Aerospace Ltd

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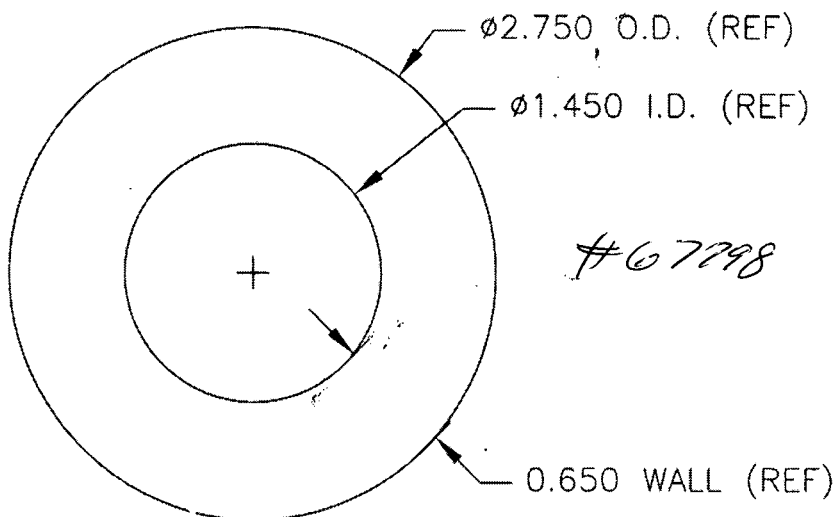
NOTE: Date & initial all entries



DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6011	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	
A1	02-01-29	UPDATE TOLERANCE ON OD	

SPECIFICATION CONTROL DRAWING


RELEASED
01-08-17



NOTES

- 1) D6011-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6011-115

- 2) MATERIAL: 2.750 OD x 0.650 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ~~ASTM B210 AS FOLLOWS~~ ^{ANSI H35.2 AS FOLLOWS} 
O.D.: ~~± 0.006 MEAN (±0.012 INCLUDING OVALITY)~~ ^{± 0.015 MEAN (±0.030 INCL. OVALITY)}
WALL: ±0.020 MEAN (±0.065 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.125/-0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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NOTE: Date & initial all entries

Packinglist ALUnna AG

ALUnna ref. no.	41291/2
Customer PO	PO. 13753
Date:	12.24.11

Boxmarking:

Boxmarking:
Dart Aerospace PO. 13753
D6011 - 115
Made in Germany Dest.: Hawkesbury Ont, Canada

Date: 12.24.11

We hereby declare that the wooden packing material are totally free from bark and apparently

[illegible]

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
 K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1484/11
Cert No. / No. du certificat:

Bestellnummer: PO 13753
Order No. / No. de commande

Auftrag: 41291/2
Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst
Product / Produit: Tubes seamless extruded

Spezifikation: AMS - QQ - A - 200/11; Spezifikation Dart Aerospace D6011-XXX
Specification:

Werkstoff: 7075
Alloy/Alliage:

Zustand: T6511
Temper/État

Abmessung: 2,750 INCH x 1,450 INCH x 0,650 INCH x 115,00 INCH
Size / Dimension: Buff finish

Kennzeichnung: ALUnna - Cert No. 1484/11 - 7075 - T6511 - Cast No. 83942 - AMS - QQ - A - 200/11 - 2.750" OD x 0.650" Wall -
Marking/Marquage: Heat Lot No. 400985 - ALUnna Order Conf No. 41291/1-1 - P.O. 13753

Lieferung:
Delivered Material / Matériel délivré:

pcs.

lbs

22

1104

Country of Manufacture: Germany

Products are in accordance with applicable RoHS

Elemente ohne Grenzwerte:

einzel max. 0,05 %, insgesamt 0,15 %

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ Cast No.	min. max.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
83942		0,40	0,50	1,2 2,0	0,30	2,1 2,9	0,18 0,28	5,1 6,1	0,20					
		0,08	0,15	1,44	0,05	2,48	0,19	5,75	0,03	0,01	0,03			0,0002

Hydrogen content: 0,11

ccm/100 g Al

Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat Lot No.
min. max.	77,0	66,0				
1 2	86,855 87,000	79,895 80,040	10,0 10,0			400985

RMS outside 25 - max. 18,0 µ"

Ergebnis der Prüfungen:

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

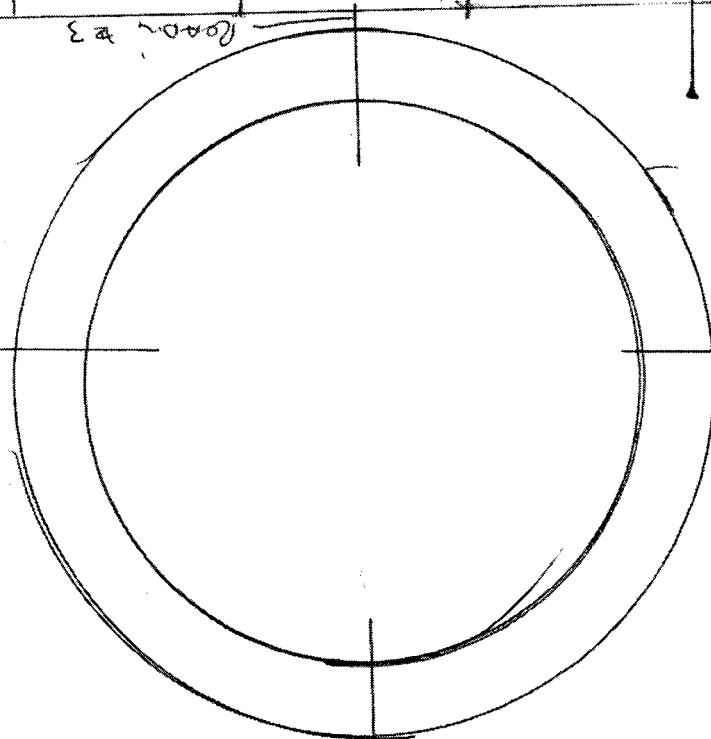
Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

5/2/01/13



B6 7798

D601-15

Estimate

made up

Leadin in

Leadin #1

Leadin #4

Leadin #2

Tube #	Tube #	Leadin #1	Leadin #2	Leadin #3	Leadin #4
10	10	663	665	632	655
9	9	673	655	639	649
8	8	68	663	647	632
7	7	655	639	655	665
6	6	653	640	640	660
5	5	645	664	659	637
4	4	652	649	638	663
3	3	647	633	648	665
2	2	641	645	650	666
1	1	635	647	676	656

